Instructor: Dr. LUO, Ye
Office: Herman Brown 422
Email: luoye@rice.edu
Time: TR 9:25-10:40 PM
Classroom: Herman Brown 453
Office Hours: just stop by my office
Class Webpage: Look for Math 567 on Owlspace

Prerequisite: Know the basics about algebraic geometry (Math 465/565 level).

Course Description: The primary goal of this course is to give an introduction of several related subjects: toric varieties, tropical geometry and several approaches to nonarchimedean geometry (e.g., classical rigid geometry, formal algebraic geometry and Berkovich analytic spaces).

Texts: I will not follow strictly on a single textbook. The following references will be helpful. In addition, I will also upload useful materials to owlspace.

1. Toric varieties:
   (a) "Introduction to toric varieties" by William Fulton
   (b) "Toric varieties" by David Cox, John Little and Hal Schenck
2. Tropical geometry: "Introduction to Tropical Geometry" by Diane Maclagan and Bernd Sturmfels
3. nonarchimedean geometry:
   (a) "Lectures on Formal and Rigid Geometry" by Siegfried Bosch
   (b) Course notes "Non-Archimedean Geometry" by Matthew Baker

Homework: There will be about 1-2 sets of homework problems on the very basics (mainly computational aspect) of toric varieties and tropical varieties. Possibly I will also ask you to give presentations at a certain stage.

Exams: There will be no exams.

Grades: Your final grade will be based on class attendance and efforts in homework (and possibly presentations).

Some Expectations: It is your responsibility to keep track of the announcements and changes on syllabus, policy and course schedule made during classes. Not all announcements will be posted on the website. You are welcome to contact me via email for information and questions in class.

Honor Code: You should be familiar with the Rice University Honor Code. A handbook is available at http://honor.rice.edu/honor-system-handbook

Disability Support: Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center (http://dss.rice.edu).